

In re Application of: Nicolau, C.Y. et al.

Serial No: 09/920,310

Filed: August 01, 2001

Title: Ammonium Salts of Hemoglobin Allosteric
Effectors, and Uses Thereof

One of the property of

## CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on: January 9, 2002.

Kirsten Willett

Commissioner for Patents Washington, D.C. 20231

## INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. § § 1.56 and 1.97 (b)(3), submitted herewith on a Form PTO-1449 is a list of publications known to Applicants and their Agent. A copy of each publication is also being submitted herewith. Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached Form 1449.

This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute

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"prior art" under United States law, Applicants reserve the right to present to the Office the relevant facts and law regarding the appropriate status of such documents. Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents should one or more of the documents be applied against the claims of the present application.

Under 37 C.F.R. § 1.97 (b)(3), this Information Disclosure Statement is being submitted before the mailing date of the first Office Action on the merits; therefore, no fees are believed to be due. However, the Commissioner is hereby authorized to charge any required fee to our Deposit Account, No. 06-1448.

Respectfully submitted,

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets of necessary)			cket Number (Optional) 4V-005.01 (22109-501)	App 09/9	lication Number 30,310		$\boldsymbol{x}$
			Applicant Nicolau et al.			CENTER	MAC D
	PAN 2 5 200	Film Au	ing Date gust 01, 2001	Grou 1614	up Art Unit 4	田田	E 9
	PATEZ 25 200		S. PATENT DOCUMENTS			<u> </u>	2
EXAMINER INITIAL	DOCUMENT SHORES	DATE	NAME	CLASS	SUBCLASS	<b>10</b> FII <b>25</b> AI	PPROPRIATE
	AA US 5,906,915	05/25/99	Payrat et al.	435	2	0	<u>.                                    </u>
	AB US 5,612,207	03/18/97	Nicolau et al.	435	173.6		
	AC US 5,451,205	09/19/95	Roth et al.	604	6		
	AD US 5,344,393	09/06/94	Roth et al.	604	4		·
	AE US 5,428,007	06/27/95	Fisher et al.	514	6		
	AF US 4,887,995	12/19/89	Abraham et al.	604	4		
	AG US 5,296,466	03/22/94	Kilbourn et al.	514	6		
	AH US 5,039,665	08/13/91	Markov	514	23		
	AI US 5,015,663	05/14/91	Suh et al.	514	510		
	AJ US 4,948,582	08/14/90	Suh et al.	424	529		
	AK US 4,866,052	09/12/89	Hider et al.	514	184		
	AL US 4,861,795	08/29/89	Suh et al.	514	510		
	AM US 4,849,416	07/18/89	Pendleton et al.	514	150		
	AN US 4,757,052	07/12/88	Markov	514	23		
	AO US 4,751,244	06/14/88	Abraham et al.	514	563		
	AP US 4,731,473	03/15/88	Abraham et al.	562	464		
	A Q US 4,731,381	03/15/88	Abraham et al.	514	571		
	AR US 4,699,926	10/13/87	Abraham et al.	514	563		
	AS US 4,546,095	10/08/85	Markov	514	23		
	AT US 3,847,738	11/12/74	Brake et al.	195	1.8	_	
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INFORMATION DISCLOSURE CITATION IN AN APPLICATION			Docket Number (Optional) GMV-005.01 (22109-501)		Application Number 09/930,310				
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	- 20	n	Nicolau et al. Filing Date	Gro	up Art Unit	2 -	<del></del>		
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		F	OREIGN PATENT DOCUMENTS		<u>{</u>	JAN 2 9 2002 Translatt YES	П		
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES YES	NO		
A	.U WO 95/03068	02/02/9:	5 PCT				X		
A	WO 93/16688	09/02/91	B PCT				X		
A	W WO 92/20369	11/26/92	PCT				X		
A	X WO 92/20368	11/26/92	2 PCT				X		
A	Y EP 0 146 338 A2	06/26/85	5 European Patent Application				X		
A	.Z JP 51-108020	09/25/70	5 Japan			English Translation of Japanese Patent Abstract			
В	A JP 55-147295	11/17/80	) Japan			English Translation of Japanese Patent abstract			
OTHER DO					or, Title, Date, Perti				
В	B 164-172, (1987)	Hirst et al.; "The Modification of Hemoglobin Affinity For Oxygen and Tumor Radiosensivity by Antilipidemic Drugs", Radiation Research 112: 164-172, (1987)							
В		Ogata and McConnell.; "Triphosphate Spin-Label Studies of Allosteric Interactions In Hemoglobin", Annals of the New York Academy of Sciences, 222: 56-67, (December 31, 1973)							
В	Ruckpaul et al.; "Interaction of Hemoglobin with Ions Allosteric Effects of the Binding of Anions", Biochimica et Biophysica Acta 236:211-221, (1971)								
В	Benesch and Benesch; "The Effect of Organic Phosphates From the Human Erythrocyte on the Allosteric Prosperities of Hemoglobin", Biochemical and Biophysical Research Communications, 26 (2): 163-167, (1967)								
В	•	Lalezari et al.; "New Effectors Of Human Hemoglobin: Structure and Function", Biochemistry 29: 1515-1523, (1990)							
В	Abraham et al.; "Design, Synthesis, and Testing of Potential Antisickling Agents. 1. Halogenated Benzyloxy and Phenoxy acids", J. Med. Chem. 25: 1015-1017, (1982)								
В	H 1985)	Teisseire et al.; "Physiological Effects of High -P 50 Erythrocyte Transfusion on Piglets", Journal of Applied Physiology, 58(4): 1810-1817, (April 1985)							
Е	1983)	" Superoxid	e Dismutase and Lipoperoxidation in Down's Syndro	ome Fetal Brain	", The Lancet 1: 88	1-882, (April 1	6,		
В	Benesch and Benesch; "I 1969)	ntracellular	Organic Phosphates as Regulators of Oxygen Releas	e by Haemoglob	in", Nature, 221: 6	18-622, (Febru	ary 15,		

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INFORMATION DISCLOSURE DE LEATION IN AN APPLICATION	GIVI V -003.01 (22107-301)		Application Number 09/930,310	유 <b>두</b>	RE	
(Use several sheets if necessary)  JAN 2 5 2002	Applicant Nicolau et al. Filing Date August 01, 2001		Group Art Unit 1614	NTER 1600/290	CEN	
BK 1972) RADEMAR	dion Study of Binding of 2,3-Diphosphog		4	<u>ප</u>		
BL	l and X-ray Studies of Potential Antisickli					
BM Sci. USA, 84: 6894-6898, (Oc						
	npound with Potent Effects on the Oxygen affinity of Hemoglobin, on Blood Cholesterol, and on Low Density d. Sci. USA, 85: 6117-6121, (August 1988).					
Bruggemann et al.; "Low Oxy 478-485, (June 1995)	gen-Affinity Red Cell Produced In a Large	e-Volume, Continous-Flow	Electroporation System'	', Tranfusion 3	5(6):	
EXAMINER		DATE CONSIDERED	_			
EXAMINER: Initial if citation considered, whe conformance and not considered. Include copy			v line through citation	if not in		